

Raymond Wilson Honoured with Two Prestigious Prizes

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Ray Wilson, who retired from ESO in 1993, was awarded two prestigious prizes in September 2010 for his outstanding work on telescope optics: the Kavli Prize in the field of astrophysics and the Tycho Brahe Prize 2010 of the European Astronomical Society.

Announced in June 2010, and awarded in Stockholm in September, the million-dollar Kavli Prizes were awarded to eight scientists “whose discoveries have dramatically expanded human understanding in the fields of astrophysics, nanoscience and neuroscience” (see the Kavli press release¹). The Kavli prize is awarded by the Norwegian Academy of Science and Letters, the Kavli Foundation and the Norwegian Ministry of Education and Research. The Kavli Foundation is funded by Fred Kavli, the Norwegian entrepreneur and philanthropist who later founded the Kavlico Corporation in the US — today one of the world’s largest suppliers of sensors for aeronautical, automotive and industrial applications. There were three recipients in astrophysics, all acclaimed for their work on the development of giant optical telescopes² — Roger Angel of the University of Arizona, Tucson, attached to Steward Observatory; Jerry Nelson of the University of California, Santa Cruz and long associated with the Keck Observatory; and Ray Wilson. The photograph on the facing page (upper) shows the three prize winners at the prize award ceremony in Oslo.

The Tycho Brahe Prize of the European Astronomical Society (EAS) is awarded annually in recognition of the development or exploitation of European instruments, or major discoveries based largely on such instruments. The prize is sponsored by the Klaus-Tschira foundation, based in Heidelberg, Germany. Announced in April, Ray received the prize at the JENAM meeting in Lisbon, Portugal (see the article by Sandu and Christensen, p. 42) and, at the plenary session on 10 September 2010, he delivered a lecture entitled “From the ESO NTT to the



VLT and the 42-metre ELT: the development of active optics as the basis of all modern telescope optics”. Figure 1 shows Ray receiving the Tycho Brahe prize from the retiring president of the EAS, Joachim Krautter.

Ray Wilson, who was born in England and educated at Birmingham University and Imperial College London, arrived at ESO in 1972 from Zeiss at Oberkochen, Germany where he had been head of the Optical Design Department for Astronomical and Analytical Instruments. At ESO, first in Geneva and then in Garching, he was the first head of the ESO Optics and Telescopes Group. The revolutionary active optics of the 3.58-metre NTT, inspired by two years of work at the La Silla Observatory, was the crowning achievement of Ray’s work at ESO. This successful concept, where both the alignment of the optical elements as well as the shape of the flexible primary mirror are controlled in a closed loop based on the measurements of a wavefront sensor, was then also used for the VLT 8.2-metre telescopes. In addition, Ray contributed to telescope designs with more than two powered mirrors, which are now being explored for the next generation of extremely large telescopes, such as the European Extremely Large Telescope (E-ELT) project.

Figure 1. Ray Wilson receiving the Tycho Brahe prize from the president of the EAS at the JENAM meeting in Lisbon, Portugal.

During his last years at ESO he began work on his magnum opus, the two-volume work *Reflecting Telescope Optics*, published by Springer⁵. Volume I: *Basic Design Theory and Its Historical Development*, first appeared in 1996, and Volume II: *Manufacture, Testing, Alignment, Modern Techniques* followed in 1999. Both are currently in their second edition and Ray is working on updates for the third editions. Ray has also been honoured by a number of other prizes, including the Karl Schwarzschild Medal of the German Astronomical Society, an appointment as Chevalier of the French Légion d’Honneur and the Prix Lallemand of the French Academy of Sciences.

Links

- ¹ The Kavli Prize: <http://www.kavlifoundation.org/kavli-prize>
- ² Announcement of Kavli Prize for astrophysics: <http://www.kavlifoundation.org/2010-astrophysics-citation>
- ³ ESO announcement of Kavli Prize: <http://www.eso.org/public/news/eso1022/>
- ⁴ Announcement of Tycho Brahe Prize: <http://www.eso.org/public/announcements/ann1018/>
- ⁵ Wilson, R. N. 2004, *Reflecting Telescope Optics*, Volumes I and II, 2nd edition, (Heidelberg: Springer)